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THE IMPACT OF PERMANENT PACEMAKER IMPLANTATION FOLLOWING TRANSCATHETER AORTIC VALVE REPLACEMENT ON OUTCOME

Poster Contributions
Hall C
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Session Title: Valvular and Structural Heart Intervention
Abstract Category: 42. TCT@ACC-i2: Aortic Valve Disease
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Background: Timing, causality, and outcomes of permanent pacemaker (PPM) following transcatheter aortic valve replacement (TAVR) remains poorly described.

Methods: Symptomatic aortic stenosis patients undergoing TVAR were followed for timing and underlying causes of PPM implantation. They were categorized into 3 groups according to those with no PPM (NoPPM), prior PPM (PrePPM), and PPM post-procedure (PostPPM) and the outcomes were compared. The primary end point was mortality at 1 year. Secondary end points included major stroke, worsening heart failure class, and hospital length of stay.

Results: A total of 450 consecutive patients underwent TAVR. The median implantation time was 4 days (range: 1-17) with the most common underlying cause being complete AV block (58%). Baseline characteristics in NoPPM (n=347), PrePPM (n=78) and PostPPM (n=25) groups reveled the highest prevalence of Afib in the PostPPM group compared with PrePPM and NoPPM patients (56% vs. 28% and 33%; p=0.03). PostPPM patients had a trend towards higher early mortality compared to NoPPM and PrePM (landmark p=0.09); however, no difference in mortality was found at 1 year (p=0.63). (Table)

Conclusion: The most frequent PPM cause is complete AV block. Although not associated with 1-year mortality, the clinical complications were higher in patients who required PPM compared to those who did not. Efforts to minimize conduction disturbances in TAVR patients are warranted.

Outcomes according to No PPM, PrePPM and PostPPM groups				
Outcomes	NoPPM n=347	PrePPM n=78	PostPPM n=25	Pvalue
Mortality 30 days, (%)	33 (9.5)	5 (6.4)	4 (16)	0.46
Mortality 1 year, (%)	77 (22)	19 (24)	12 (48)	0.91
Major stroke, (%)	11 (3.2)	3 (3.9)	3 (12)	0.08
Worsening heart failure class, (%)	57 (17)	19 (25)	12 (48)	<0.01
Hospital lenght of stay, (%)	9.1± 6.8	9.1 ± 6.8	12.8 ± 9.6	<0.05